



THE BURDICK CORPORATION

MILTON, WISCONSIN

November 29, 1940

F. J. Moennighoff, M.D.
313 Broadway
Monett, Mo.

Dear Doctor Moennighoff:

Replying to your recent request, we are enclosing an abstract of an article on iontophoresis for the treatment of Athlete's Foot. We trust this gives you the desired information.

If we can be of further service, kindly advise.

Very truly yours,
THE BURDICK CORPORATION

G. E. Crosley

G. E. Crosley, M.D.
Medical Director

GEC:hw
Enc.
Syllabus
#5-1940.



SYLLABUS

REG. U. S. PAT. OFF.

A BULLETIN OF PHYSICAL THERAPY *and* ELECTROSURGERY

VOLUME 16 — NUMBER 5 G. E. Crosley, M. D., Editor

MAY - JUNE, 1940

EDITORIAL

TUBERCULOSIS CASE FINDING

Improved methods of sanitation and milk control during recent years have been of measurable benefit in the constant fight against the tubercle bacillus.

With these and other methods of control well under way, the problem now becomes one of diagnosis. It is the practicing physician who has an opportunity to prevent progress of the disease by early discovery of cases.

Many times, the x-ray will pick up evidence of incipient tuberculosis which the stethoscope has missed. The physician who has ready access to x-ray and fluoroscope equipment can perform a useful public service by looking into the lung structure of all patients who have frequent colds, loss of weight or other evidence suggestive of early tubercular infection.

QUESTIONS *and* ANSWERS

This is your department. If you have any question regarding physical therapy equipment, we will do our best to find the answer in authoritative text-books and current literature. Your name will not be disclosed.

ANAL FISSURE

Q. What technic is used in treating anal fissure with a low voltage current?

A. A local anesthetic is employed in the fissure area. Using the galvanic current, the negative pad electrode is applied under the sacrum. The positive pole is attached to zinc wire, wrapped in cotton saturated in 1% zinc sulfate solution and placed in the fissure. Current is turned on and raised gradually from zero to patient's tolerance, 10 milliamperes, for 15 minutes. The proced-

(Continued on page 2)



The Columbia Presbyterian Medical Center, New York

Treatment of Athlete's Foot and Ringworm

HOWARD W. HAGGARD, MAURICE J. STRAUSS
AND LEON A. GREENBERG

The ideal method of treating fungous infections would be the introduction of a fungicide into the skin without injury to the skin. This we have attempted to do by passing copper, which is highly fungicidal, through the skin by iontophoresis. The results obtained with this therapy are distinctly favorable. The great majority of patients treated by this method were promptly relieved of all symptoms of dermatophytosis.

The feet are immersed in rectangular enamel pans about 5 inches deep and the hands in bain-marie basins. Copper electrodes are used. The duration of treatment is twenty minutes. When the infection is on the feet, the hands are immersed in saline solution and the feet in 0.2 per cent copper sulfate solution; for infection on the hands the relations are reversed.

The positive pole of the source of current is attached to the electrode in the copper solution and the negative to that in the saline solution. The authors employ from 4 to 6 milliamperes if only one hand or foot is immersed and from 8 to 10 milliamperes if both are immersed. The current can be gradually increased to prevent any shock.

When possible each patient is treated two or three times a week. Cleansing of the hands and feet for immersion is particularly important.

The results of treatment were most striking in those cases in which the infection was particularly active and showed bullae and vesicles. In most instances subjective symptoms disappeared within twenty-four hours after the first treatment and the vesicles flattened out without rupturing.—*J. A. M. A., Apr. 1, 1939.*

In the treatment of fungous infections by the method described above, The Burdick Sine-O-Tron is desirable for its smooth operation.

Questions and Answers (Cont'd.)

ure is repeated in ten days or two weeks, if necessary.

ORAL BISMUTH AND FEVER THERAPY

Q. Is there any contraindication to the use of Sobisminol Mass in conjunction with Fever Therapy?

A. Although this orally administered antisyphilitic is still too new to have been employed on a large scale in conjunction with Fever Therapy, there seems to be no reason for not employing the two methods of treatment simultaneously. The use of the heavy metals parenterally in addition to Fever Therapy has been recommended by a number of different authors, and beneficial effects might likewise be expected by the oral route in properly selected cases.

HYDROCELE

Q. Is electrosurgery recommended in the treatment of hydrocele?

A. Wright and Loeb (Annals of Surgery, 1939) describe an operation which consists in opening, evacuating and excising the sac electrosurgically. It is claimed that this method affords excellent hemostasis and skin crypt sterilization. A minimum of absorbable suture material is employed, and drainage is unnecessary.

Ultraviolet in Orthopedics

A. R. SHANDS and R. B. RANEY

Ultraviolet irradiation is of specific benefit in rickets and osteomalacia. It has long been known to be of value in bone and joint tuberculosis. In the treatment of a wide variety of conditions with which a state of chronic malnutrition is associated, ultraviolet light is a useful adjunct.—*Handbook of Orthopaedic Surgery*, pub. by C. V. Mosby Co., 1940, p. 331.

For both antirachitic and bactericidal ultraviolet effectiveness, use a Burdick Quartz Mercury Ultraviolet Lamp.

Electrocoagulation of Carcinoma of the Rectum

A. GERSON CARMEL

Electrocoagulation has been employed for a number of years in the treatment of carcinoma of the rectum. Most authors who have reported on its use have concluded that it has a definite place in cancer therapy, viz. to afford palliation in inoperable cases and in patients who refuse radical surgery.

It has also been felt that in some instances impending obstruction has been overcome and a colostomy obviated.

Clinically, aside from the amelioration in the local symptoms, there occurs a

remarkable gain in weight and strength after one or two treatments, and, according to Strauss, a return of the blood hemoglobin to normal. These changes seem to be the rule, even in cases that are not cured—at least temporarily.

In order to perform satisfactory electrocoagulation, adequate exposure of the lesion to be treated must be secured. This can be accomplished by opening up the rectum by a posterior incision, and then the tumor which is thus laid before the vision of the operator is electrocoagulated. This method, for the most part, has given way to the use of especially constructed non-conducting proctoscopes and electrodes.

There seems to be little doubt that the method has a field of usefulness in inoperable cases and in those who refuse radical surgery. In such cases the results from electrocoagulation may be superior to those obtained from radiotherapy alone.—*Med. World*, Mar. 1940.

The Burdick Blended Current Electrosurgical Unit is an ideal instrument for the treatment of carcinoma.

Iontophoretic Medication in Eye Diseases

GUSTAV ERLANGER

The introduction of drugs into living tissues by weak galvanic currents promises to play an important role in modern therapy because of proof that iontophoretic medication within physiologic limits often attains pharmacodynamic effects and therapeutic results superior to methods in common practice.

According to the author's observations of many years, diseases of the cornea respond frequently to iontophoretic medication. He generally uses combinations of zinc and adrenalin (zinc sulfate 1:400 and two or three drops of adrenalin 1:1000), calcium chloride (1:300) and adrenalin, or quinine hydrochloride (1:500). Zinc is effective as a disinfectant, adrenalin regulates the altered balance of the autonomic nervous system, calcium has a similar effect and increases in combination with adrenalin the effect of adrenalin, as its synergist. Quinine acts as a mild disinfectant and has a stimulating action on the changed epithelium.

In acute infections of the cornea he begins with zinc-adrenalin iontophoresis, two to three treatments, and calcium and adrenalin for subsequent treatments. In chronic cases calcium-adrenalin iontophoresis is more effective. Quinine iontophoresis can be applied in cases of herpetic origin. All of these methods do not interfere with the usual treatment by ointments or drops or any specific treatment which may be indicated.

Iontophoretic treatment of diseases of different parts of the body, and especially of the eye, directs attention to a

thorough study of the changes in the tissues of the body and of the eye.

Experimental studies in connection with iontophoretic medication stress the particular involvement of the autonomic nervous system. These studies lead to new viewpoints of the physiology of the eye and the pharmacodynamics of drugs.

Iontophoretic medication is of value in the treatment of the anterior parts of the eye, and often is preventive because of the thorough absorption of infiltrations in corneal diseases. Treatment of the posterior parts of the eye has become effective since the iontophoretic application of acetylcholine and similar drugs has been initiated.—*The Eye, Ear, Nose and Throat Monthly*, March, 1940.

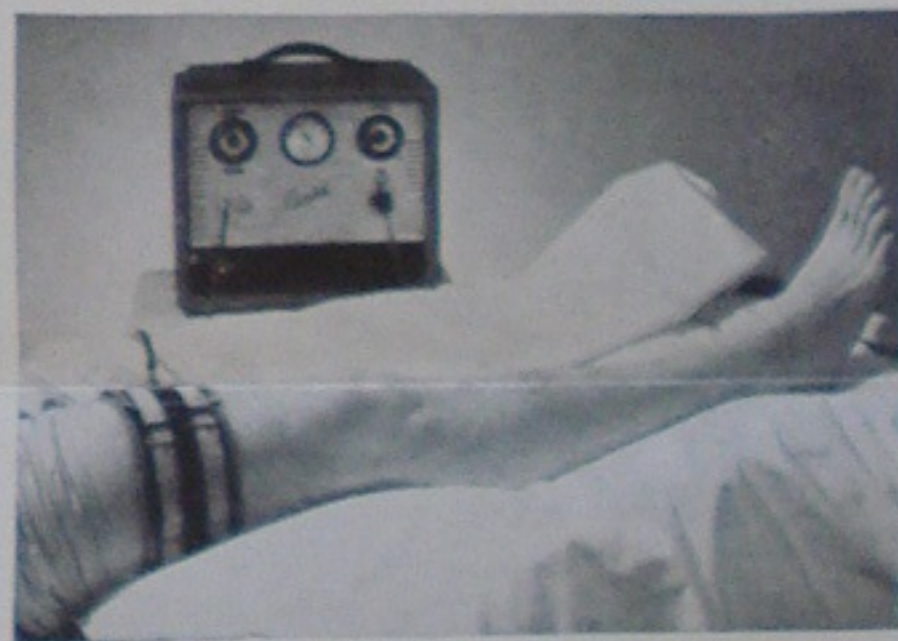
For smooth iontophoresis, use the Council-Accepted Burdick Iontophore.

A Most Prominent DISEASE

Authoritative statistics reveal that peripheral vascular disease constitutes one of the most important causes of debility.

A Most Valuable TREATMENT

Authoritative literature in current periodicals discloses that rhythmic venous constriction provides a comfortable, inexpensive, easily controlled and effective means of therapy for occlusive peripheral vascular disease.



The *Burdick*
**Rhythmic
Constrictor**



is effective in relieving pain, increasing vascularity, elevating skin temperature and improving the prognosis in such conditions as peripheral vascular sclerosis, early thromboangiitis obliterans, acute vascular occlusion, diabetic ulcers, intermittent claudication, chilblains.

Short Wave Diathermy in Sinusitis

A. R. HOLLENDER

The introduction of short wave diathermy has led to a more general utilization of heat therapy in the management of inflammatory processes.

Local deep heating of the anatomic areas in which the sinuses are situated produces analgesia through hyperemia and hyperlymphia, improves tissue metabolism, increases resorption and consequently brings about a more rapid defensive response to infection.

Proper selection of cases is one of the primary prerequisites for the scientific utilization of short wave diathermy as a therapeutic agent in cases of nasal sinusitis.

In addition to conventional treatment, short wave diathermy is an effective therapeutic aid in cases of acute maxillary sinusitis.—*Archives of Otolaryngology*, Aug. 1939.

The Burdick Magnetherm provides both conventional and electromagnetic induction short wave diathermy.

Short Wave Diathermy in Gynecology

JUSTINA WILSON

After 20 years of experience with diathermy and 5 with short-wave therapy, it is the author's belief that the latter is definitely superior.

Under the influence of this deep and homogeneous heating, the dense hardness of the vaginal vault softens as the exudates disappear, and cicatricial tissues and adhesions become stretched, more vascular, and thinner.

Short-wave therapy alters the permeability of the cell membranes, stimulates the circulation through the parts treated, and greatly increases the speed at which blood corpuscles travel through the capillaries. Thus tension is reduced and pain relieved as inflammatory exudates are absorbed.

There is a marked improvement in the patient's general condition—appetite is increased and weight is gained, sleep is improved, the fatigue and irritability that accompany chronic pelvic disease disappear.

Technic: The patient should lie on a couch, on her sound side, the side to be treated being uppermost, in order to avoid concentration on the posterior electrode, or else in the supine position, on a suitable couch of latticed wood, with one electrode behind the sacrum and the other behind the flexed thighs. Failing this, a canvas deck chair does very well.

In all acute cases, it is well to begin with short treatments of five minutes,

★ ★ At the A. M. A. Convention

... be sure to inquire at the Burdick Exhibit about the following Council-Accepted units: Booth 282.

BURDICK TRIPLEX—Short wave, electromagnetic induction, long wave diathermy and electrosurgery.

BURDICK ULTRIPLEX—Ultra-short wave, electromagnetic induction, long wave diathermy and electrosurgery.

BURDICK MAGNETHERM—Electromagnetic induction, long wave (conventional) diathermy and electrosurgery.

BURDICK SWD-52 Short Wave Diathermy.

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BURDICK RHYTHMIC CONSTRICTOR for peripheral vascular therapy.

BURDICK SUCTION-PRESSURE UNIT for peripheral vascular therapy.

BURDICK ZOALITE INFRA-RED LAMPS—for hospital, office and home.

BURDICK ULTRAVIOLET LAMPS—a complete line of air-cooled and water-cooled quartz mercury ultraviolet equipment.

BURDICK IONOPHORE Low Voltage Generator.

BURDICK FEVER CABINET for air-conditioned hyperpyrexia.

BURDICK BLENDED CURRENT ELECTROSURGICAL UNIT

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The NEW

Burdick

ULTRIPLEX



with distances of from 10 to 15 millimeters. Long treatments during this stage invariably produce pain. Only the mildest degree of warmth should be experienced. Daily treatments are given, with an occasional rest, and the time is increased carefully to 20 minutes. After ten days, the treatment is given three times weekly. Masses as large as an

orange will gradually disappear under this type of treatment.—*Brit. J. Phys. Med.*, Aug. 1939, from abst. in *Clin. Med. and Surg.*

The Burdick Magnetherm or Burdick Triplex offer you deep short wave diathermy necessary in gynecology.

Provocative Diathermy

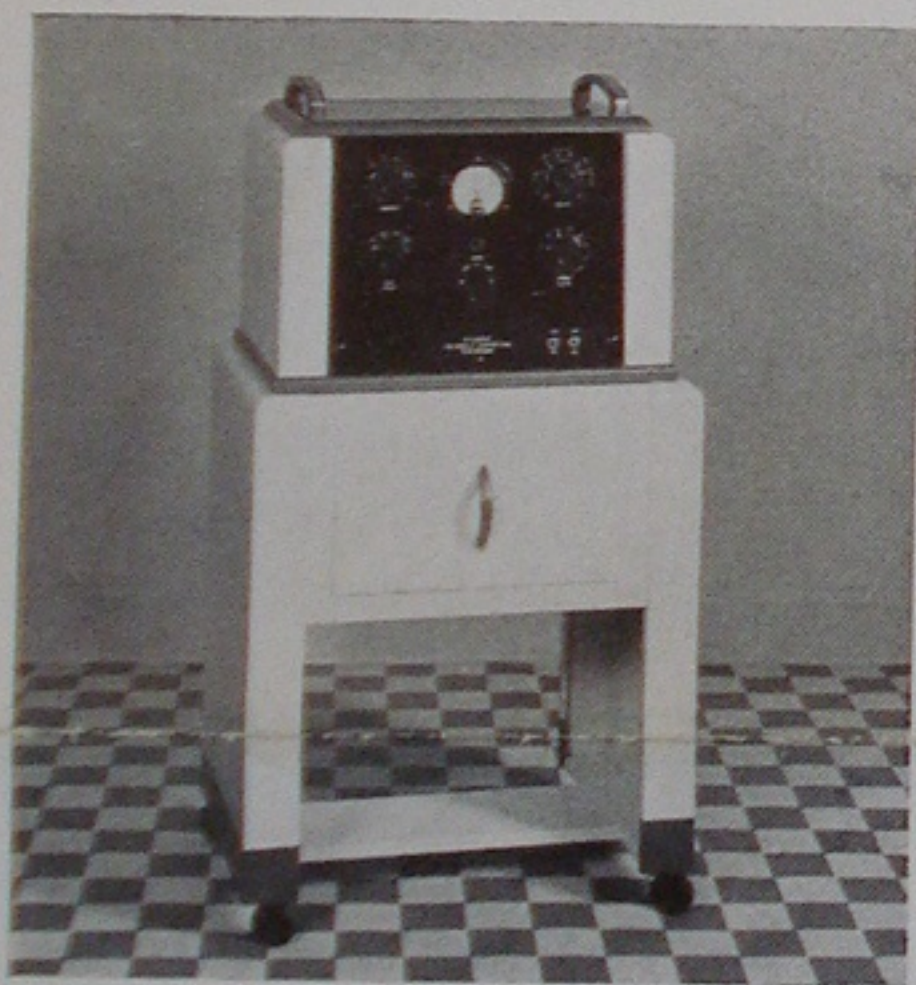
MICHAEL S. POPKIN

It can be reasonably expected that all local diathermy treatments result in an acceleration of local metabolic processes through stimulation of cell activity and hyperemia. The physiological effects produced by medical diathermy are increased circulation, sensory and motor nerve sedation, and bactericidal action. The therapeutic uses of the diathermy treatment are relief of pain and spasm and the promotion of nutrition and absorption.

It is due to this fact, that medical diathermy promotes absorption, that a sedimentation test performed one hour after the provocative diathermy treatment may indicate the presence of infection that is not quiescent and so warn against operation that may result in a stormy post-operative course.

In the author's clinic, on the day previous to operation, all cases of non-urgent pelvic inflammatory disease are given the provocative diathermy. One to two hours later, a blood sedimentation

Low Voltage Therapy at Its Best



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A number of physicians find Zolites so effective in relieving pain, tension and stasis that they have a large Zolite for routine office use and a Portable Zolite for the treatment of home cases.

You, too, will find many advantages in having an additional Zolite.



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test is performed. If the rate has increased significantly over the previous rate or is over 18 mm. for the hour, operation is postponed.

In such a case the provocative diathermy followed by the sedimentation test is repeated at two day intervals, until such time when no marked increase in the rate is observed. Then, and only then, is operation performed.

For more than three years that this practice has been adopted in the clinic there has been a decrease in the morbidity as well as a decline in the number of cases of stormy convalescence following elective pelvic operations — *Journal Conn. S. Med. Soc.*, Nov., 1939, from abst. in *Journal Ohio State Med. Assn.*

Burdick diathermy apparatus constitutes a complete line of short wave, long wave, electromagnetic induction and electrosurgery units.

Early Diagnosis of Tuberculosis

DAVID TOWNSEND

X-rays of the chest are of valuable assistance and should always be made, if possible, as a routine procedure. In this connection, if one will discount his physical findings by at least a third, that is, if he will consider that there is a third more affected area in the chest than his physical findings reveal, he will check very closely, if not absolutely, with the x-ray. Otherwise, to his dismay, he will find the x-ray reveals considerably more involvement than was brought out on examination and, as a result, much more alarm accrues to the patient.—*Diseases of the Chest*, March, 1940.

Part of your routine checkup: examination of the chest with a Burdick Fluoroscope and X-Ray unit.

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